Grade 8 Unpacked Math Standards – Measurement

8.M.1.1. Students are able to **apply** <u>proportional reasoning</u> to **solve** measurement problems with <u>rational number</u> measurements.

Webb level: 2
Bloom: Application

Verbs Defined:
Apply: use/write
Solve: calculate the solution for

Key Terms Defined:
Proportional reasoning: using proportions to solve a problem
Rational number: a number that can be written as a ratio of two integers

Teacher Speak:
Students are able to apply (use) proportional reasoning to solve (calculate the solution for) measurement problems with rational number measurements.

Student Speak:
Using rational numbers,
I can:
* calculate the solution for (solve) a proportion.
* write and solve a proportion for a given scale or a scale drawing (proportional reasoning).
* write and solve a proportion for a word problem to find a distance that could not be measured easily (indirect measurement).

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8.M.1.2. Students are able to **find** area, <u>volume</u>, and <u>surface area</u> with whole number measurements.

Webb level: 1/2
Bloom: Comprehension

Verbs Defined:
Find: calculate

Key Terms Defined:
Volume: the number of cubic units needed to fill the space inside the figure (rectangular prisms, rectangular pyramids, cylinders, and cones)
Surface area: the number of square units needed to cover the outside of the figure (rectangular prisms and cylinders)

Teacher Speak:
Students are able to find (calculate) area, volume, and surface area with whole number measurements.

Student Speak:
When given the formulas, I can calculate (find) the volume of:
*rectangular prisms
*rectangular pyramids
*cylinders
*cones
 When given the formulas, I can calculate (find) surface area of:
*rectangular prisms
*cylinders
I can find the area of a figure that is made up of two or more squares, rectangles, or triangles (composite shape).
I can use the correct unit to label volume, surface area and area.